# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/036,391 | 01/07/2002 | Stefan Schabel | Q67746 | 4486 |

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| EXAMINER |
|---|
| DSOUZA, JOSEPH FRANCIS A |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2611 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

PTOL-90A (Rev. 10/06)

| *Advisory Action* *Before the Filing of an Appeal Brief* | Application No. | Applicant(s) |
|---|---|---|
| | 10/036,391 | SCHABEL ET AL. |
| | Examiner | Art Unit | |
| | Adolf DSouza | 2611 | |

*--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

THE REPLY FILED <u>06 December 2006</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

   (a)☐ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b)☐ They raise the issue of new matter (see NOTE below);

   (c)☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d)☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *none*.

   Claim(s) objected to: *none*.

   Claim(s) rejected: *1 - 6*.

   Claim(s) withdrawn from consideration: *none*.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: <u>see attached sheet.</u>

12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____

13. ☒ Other: <u>PTO 892.</u>

DAVID C. PAYNE
PRIMARY PATENT EXAMINER

### *Response to Arguments*

1.      Applicant's arguments filed December 6, 2006 have been fully considered but they are not persuasive.

*   *Argument*: Applicant argued that in the March 21, 2006 Office Action, Examiner acknowledged that Hansryd did not disclose a wideband filter having the claimed relative bandwidth and that Examiner now maintains that Hansryd disclose a similar concept (Remarks 12/6/2006; page 2, last paragraph).

    *Response*: In the March 21, 2006 Office Action, Examiner meant that Hansryd did not disclose that the filter bandwidth is <u>0.2% to 0.4%</u> of the bit timing, that the Applicant claimed. Hansryd does disclose the relationship between filter bandwidth and bit timing but his numbers are different from the above 0.2% to 0.4%. This second point was what Examiner argued in the Office Action (9/6/2006, response to Arguments section). Examiner maintains his position that Hansryd discloses the same concept that is used by the Applicant and that the choice of the filter bandwidth is just a design parameter that is dependent on the bit rate (see Office Action, 9/6/2006, Response to Arguments). One of ordinary skill in the art can easily change the filter bandwidth according to the bit rate. This is disclosed by Hansryd (page 472, right column, "Discussions and Conclusions", last line). Though Hansryd states "higher bit rates", it is obvious to one of ordinary skill in the art that the method can also be applied to lower bit rates, which is an easier modification.

- *Argument*: Applicant has also argued that Hansryd's clock recovery technique is

   applicable only in continuous and synchronous transmission (Remarks, 12/6/2006,

   page 3, lines 6 – 7 fro bottom).

   *Response*: Examiner respectfully disagrees. Examiner could find no such statement

   made in Hansryd's reference.

- *Argument*: Applicant has argued that Examiner does not give detail as to the

   proposed modification and that there is nothing in Hansryd to suggest that to a

   skilled artisan (Remarks, 12/6/2006, page 4, last paragraph – page 3, 1st paragraph).

   *Response:* Examiner respectfully disagrees. Examiner contends that a skilled artisan

   would know that as the bit rate is reduced  from 40Gbps (Hansryd) to 10 Gbps

   (Applicant's invention), the jitter that can be tolerated on the clock signal is higher

   since the clock period increases from 25ps to 100ps. Since the clock jitter tolerance

   is higher, a low Q filter (higher bandwidth filter) would be used. As described in the

   Response to Arguments (9/6/2006 Office Action, page 2, last paragraph onwards)

   Hansryd shows in Figs. 4 and 5,the relationship between the RMS jitter and the Q of

   a filter. Examiner contends that selection of the appropriate filter bandwidth (or

   equivalently Q factor) is only a design parameter that is a function of the bit rate and

   the RMS jitter that can be tolerated.

- *Argument:* Applicant has argued that Andrews merely discloses that the delay of the

   clock recovery signal and retiming signal will be matched  and that the relationship
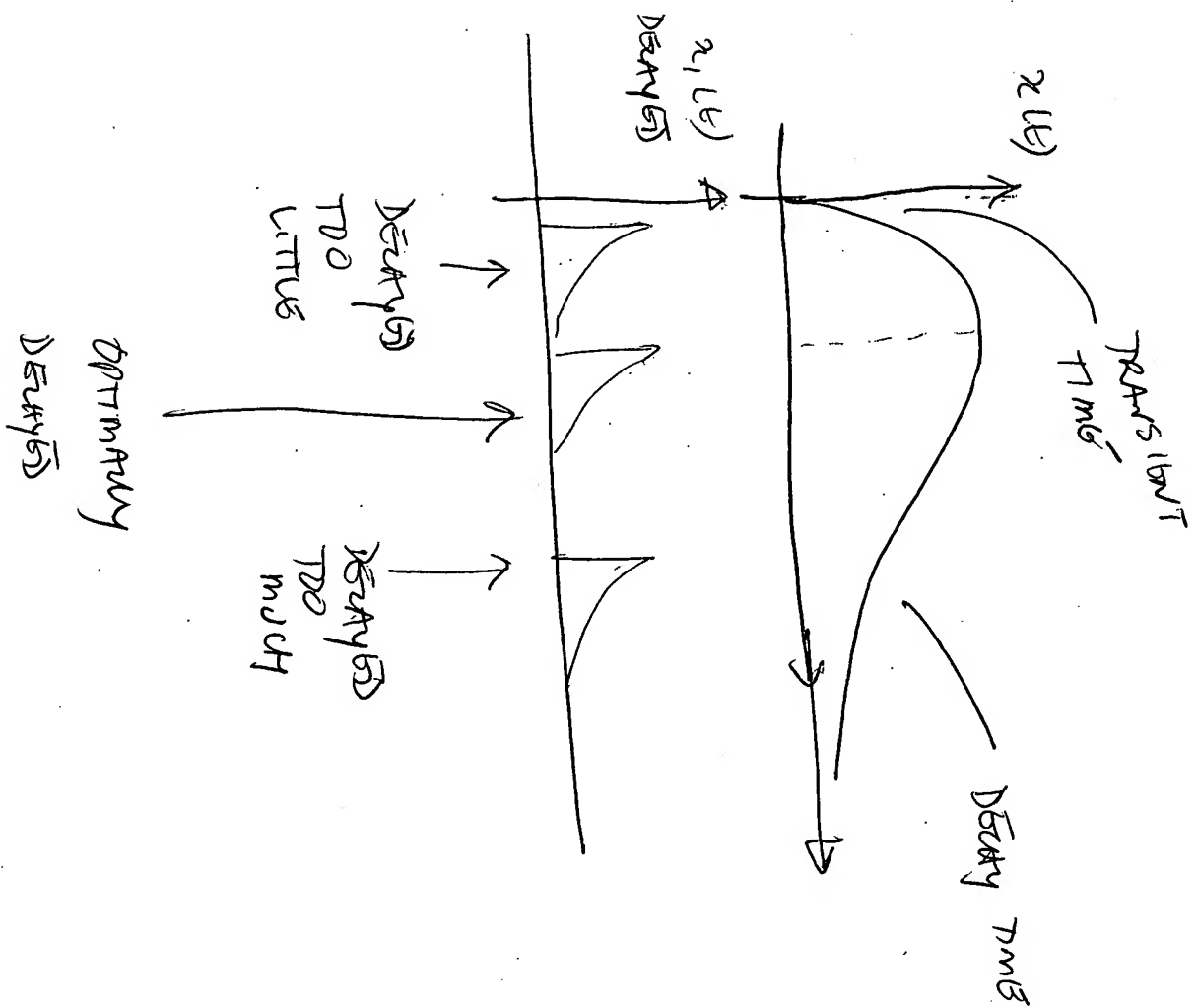
between the transient recover time, the delay time and the decay time are not disclosed (Remarks, 12/6/2006, page 4, line 6 – page , 1st 2 paragraphs).

*Response:* Examiner argued in the last Office action (9/6/2006, page 3, 2nd paragraph) that one of ordinary skill in the art knows that there are upper and lower bounds on the delay in path 18 based on the delay in path 16. These upper and lower bounds would correspond to the transient recovery and decay times. Applicant asked for a reference to show Applicant claims what Hansryd and Andrews does not (Remarks, page 5, 3rd and 4th lines from bottom). Examiner contends that any basic textbook showing the convolution of two signals graphically would show a transient and decay time. Examiner is providing a reference (Zeimer and Tranter; Principles of Communications; 1976; page 40) that discloses graphically a convolution operation. Signals $x_1(t)$ and $x_2(t)$ are convolved in Figure 2.10 to give an output signal $x(t)$. Assume, for the sake of argument, that $x_1(t)$ is the input signal and $x_2(t)$ is the impulse response of the bandpass filter. Then the output of the bandpass filter is $x(t)$ which shows a transient response and a decay response. If the input signal is delayed to match this signal, then it is obvious to one of ordinary skill in the art that if the delay is too short or too long the input won't align properly with the peak of $x(t)$. There is some optimal position between the start of $x(t)$ and the end of $x(t)$ that best matches the input signal to the peak of $x(t)$. Examiner contends that this is obvious to one of ordinary skill in the art and determines the upper and lower bounds on the delay.

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FIG 2-10